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Quine's *Two Dogmas* as a Criticism of Logical Empiricism

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Résumé : Dans les « Deux dogmes », Quine voulait démontrer que le positivisme logique n'était possible qu'en raison d'hypothèses injustifiées. L'intention de Quine était de montrer qu'il n'est possible de sauver l'empirisme que si l'on accepte une autre approche, holistique. Toutefois, l'article de Quine était anachronique dès le moment de sa publication. Le but de cet article est double. Tout d'abord, on esquissera l'argument de Quine et on le confrontera aux positions de Carnap et Dubislav. On montrera que la critique de Quine était en retard d'au moins 15 ans. En deuxième lieu, on examinera le postulat de Quine de l'empirisme sans dogmes et on comparera brièvement à la théorie de Poznański et Wundheiler. On soutiendra que ce postulat avait été réalisé déjà dans les années 1930.

Abstract: “Two Dogmas” was to demonstrate that logical positivism was possible solely due to unjustified assumptions. Quine aimed to point out that the rescuing of empiricism was possible only if another, holistic approach was accepted. However, Quine's article was anachronistic already at the time of its publication. The aim of this paper is twofold. Firstly, it will sketch Quine's argument and contrast it with the views held by Carnap and Dubislav. It will be claimed that Quine's criticism was late by more than fifteen years. Secondly, it is to examine Quine's postulate of empiricism without the dogmas and compare it briefly with a theory of Poznański and Wundheiler. It will be claimed that Quine postulate was realized already in the 1930s.

1 Introduction

There have been numerous philosophers who have “effectively” objected to logical empiricism. Popper and Kuhn are perhaps the most famous examples

here [Popper 1935], [Kuhn 1962]. Mac Lane [Mac Lane 1938], cf. [Awodey 2008, 231ff.], is a less known, but also very important critic. Quine belongs to the group of the most essential reviewers of logical empiricism, but he significantly differs from thinkers mentioned above.

Popper never withdrew his criticism of the Vienna Circle, although his factual and interpretive mistakes were often pointed out. (Nowadays, it is clear that they were so severe that his criticism cannot be treated too seriously.) And Kuhn, when he was writing his *Structure*, opposed neopositivism not even knowing well what it actually was.¹ Although Mac Lane demonstrated a fundamental mistake of the analytical criterion of what is called Language II, neo-positivism is not only Carnap, and Carnap is not only the *Logical Syntax of Language*. Unlike Popper or Mac Lane, Quine did not resort to the claim that, thanks to him, everybody knows that logical positivism is dead.² Nevertheless, the reader of “Two Dogmas” would rarely have any doubts about whom this far-reaching criticism was directed at: it was Carnap and neo-positivism.³

Quine presented “Two Dogmas” at a conference in Toronto at the end of December 1950, cf. [Creath 1991, 386, fn. 1]. His lecture aroused considerable consternation and an instant reaction: his text was published in the Spring of 1951, and two symposiums dedicated to his provocative views were held soon afterwards. Quine’s arguments provoked multidimensional controversies, which have lasted up to now: as Peter Hylton once observed, after fifty years—and we can add: also after sixty years—it is still debatable, what was actually maintained by Quine, at least in the critical part of “Two Dogmas”.⁴

For the purposes of this article we adopt the following interpretation. In “Two Dogmas” Quine criticised and rejected one of the fundamental claims of logical positivism (and named it the first dogma) and its alleged justification (the second dogma) in an analysis that can be summarised in the following way: There is no known definition or criterion of analyticity valid in *all* domains of sentences (let us mark this thesis as A_Q). This interpretation, based on Quine’s explanations given forty years after publication of “Two Dogmas”, cf. [Quine 1991, 271], has rather an austere character, and, therefore, one can hope that it will not raise any major objections.⁵

1. See his recollections in [Kuhn 2000, 306]. The similarities between Kuhn’s and the neo-positivist conceptions were pointed out already before Kuhn’s death. Cf. [Reisch 1991], [Earman 1993], [Irzik & Grünberg 1995], see also [Bird 2000, 278–280], [Friedman 2003], [Koterski 2010, 42–43], [Uebel 2011].

2. Cf. [Popper 1974, 69], [Awodey 2008, 234, fn. 14]. As for the convergence of Quine’s and the neo-positivist stances see: [Isaacson 2004].

3. Thus, Popper wrote: “[...] Quine published a very interesting critique of the *Vienna Circle* [...] And he referred to the [...] assumption that all statements are either analytical or synthetical as a ‘dogma of empiricism’. *Of course, Quine is quite right*” [Popper 1995, 14, emphasis added].

4. Cf. [Hylton 2002, 11], [Hylton 2007, 52], [Creath 2004, 47]; for an example of a classic text, whose authors try to figure out what exactly Quine’s point is, see [Grice & Strawson 1956].

5. Here I do not take into consideration the claim sketched in “Two Dogmas” that understanding of the distinction questioned by Quine requires empirical (behavioral)

Adopting less cautious readings of Quine's work, many philosophers saw "Two Dogmas" as the ultimate nail in the coffin of logical empiricism. Without the correct criterion of analyticity, neo-positivism was not able to explain the origin, necessity and cognitive emptiness of logic and mathematics. Without the backup of verificationist theory of meaning it was impossible to overcome metaphysics as syntactical nonsense. It was often concluded in a quite characteristic way: "Quine's frontal attacks on both primary principles of logical positivism in the early 1950s marked the true end of the movement" [Burge 1992, 6], see also [Burge 2003, 199].⁶

Although the results obtained by Quine can be adequately turned against some views held by some logical empiricists in some moments of their philosophical careers, all those reports about the death of neo-positivism, as will be demonstrated below, also turn out to be greatly exaggerated. The logical empiricists not only did reject the theorems criticised by Quine many years before his article, but they also defended a theory, which was a very close equivalent of "empiricism without the dogmas", with which Quine wanted to replace logical positivism.

For this reason "Two Dogmas", as well as a considerable share of the discussion generated by it, can be regarded as redundant. Moreover, by attributing verificationism and reductionism to logical positivists,⁷ Quine *volens nolens* gave his support to the "received view" interpretation of the Vienna Circle, thereby significantly contributing to falsifying the history of philosophy. *If so*, then his famous paper was not only redundant, but positively detrimental.

2 Two dogmas in the historical context

Besides all the reckless interpretations of A_Q there is also a more modest position that *if* Quine's thesis is right, *then* the basic tenets of neo-positivists are refuted. However, it is false too, because its antecedent is true, while the consequent is not.

Quine's main complaint concerns the lack of a criterion of analyticity valid "across the domain of sentences in general". Yet logical positivists were aware that the analytic/synthetic (hereafter: A/S) distinction was problematic and that it was necessary to introduce some further modification to the division of judgments established by Kant (the first one, of course, was to remove the synthetic *a priori* judgments). Already in 1930, i.e., during

criterion of analyticity, although still in the nineties Quine seemed to suggest that it was the core of his criticism, cf. [Quine, Bergström *et al.* 1994, 69, 75–77]. It turned out, however, that it was possible to provide such a criterion, cf. [Creath 2004, §3], also see below, p. 134, fn. 13, whereas A_Q was not undermined.

6. A different point of view is represented by [Poznański 1960, 362, 386 ff.].

7. Since Quine's criticism simply refers to the hitherto existing empiricism, it is inevitable that *every* logical empiricist was a dogmatic. See also below, p. 138, fn. 20.

his first visit to Vienna, Tarski tried to convince Carnap that the *A/S* distinction was vague and not objective. After the conversation with Tarski, Carnap wrote in his diary:

8-11 with Tarski in a Café. [...] concerning tautology, he does not want to agree that it says nothing about the world; he thinks that between tautological and empirical sentences there is merely gradual and subjective difference. Carnap's diary, 1930-02-22; quoted in [Haller 1992, 5]

Tarski presented a further argumentation during one of his talks at the *First Congress for the Unity of Science* (Paris 1935). He pointed out there that the division of terms into logical and descriptive was arbitrary, what resulted in the arbitrariness of the *A/S* distinction. In a letter to Neurath, he described some of the results presented in Paris as follows:

In Paris [...] I questioned the absolute nature of the division of terms into logical and descriptive ones and of sentences—into analytic and synthetic; I aimed to show that the division of terms is arbitrary and the division of sentences is to be relativised with respect to the division of terms. During the discussion Carnap regarded my remarks as very profound [...]. Tarski to Neurath, 07.09.1936 [WKS s.d., quoted with the permission of the Wiener Kreis Stichting, Rijksarchief, Haarlem, Netherlands]; cf. [Tarski 1936, 65], [Neurath 1935, 388]

Carnap, who appeared to agree with the views defended by Tarski even before the Paris meeting (see Carnap's diary quoted below), regarded them as "very profound". Although he never abandoned his work on a distinction between the analytic and the synthetic, *at least* from that moment on he fully realised that the distinction could not be of an absolute nature. Does it mean, therefore, that Quine's criticism was fifteen, or even twenty, years late? Let us try to answer this question, going backwards in time from the conference in Toronto (1950).

In September 1944 Tarski wrote a letter to Morton White, who would also question the *A/S* distinction in the future [White 1950]. The letter included the following passage:

I think that I am ready to reject certain logical premises (axioms) of our science in exactly the same circumstances in which I am ready to reject empirical premises (e.g., physical hypotheses); and I do not think I am an exception in this respect. [...] I can imagine that certain new experiences of a very fundamental nature may make us inclined to change just some axioms of logic. And certain new developments in quantum mechanics seem clearly to indicate this possibility. [Tarski 1944, 31–32]

Earlier, as we saw, Tarski claimed that the difference between tautological and empirical sentences was merely gradual. Here he talks about revisability of logical axioms what means that in his view if the notion of analyticity is to be retained, it has to be relative. If we relate this letter to the aforementioned talk Tarski had in Paris (i.e., [Tarski 1936]), we get very close to "Two Dogmas". The main difference lies in the conclusion: for Tarski relativity of analyticity was not a problem for empiricism, cf. [Frost-Arnold 2013, 97]. It does not dispel our doubts as for the belated character of "Two Dogmas" yet. In the early forties, Carnap, Quine, and Tarski met at Harvard, where they held numerous talks and the problem of analyticity was one of the covered topics, cf. [Quine 1960, 67, fn. 7], [Carnap 1963, 35–36, 63–65]; see also [Mancosu 2005], [Mancosu 2010, 395–398], [Frost-Arnold 2013, § 5]. It is at least possible that it was those discussions which catalysed the development of Tarski's views, and therefore, the lack of reference to Tarski in "Two Dogmas" is understandable. Perhaps Tarski's words "I do not think I am an exception in this respect" refer to Quine and point to the intellectual dependency of Tarski's standpoint.

However, even if Tarski referred to Quine indeed, he had also someone else in mind: Łukasiewicz. During the *Third Polish Congress of Philosophy* (Cracow 1936) Łukasiewicz gave a speech where he talked about the rejection of the (absolute) *A/S* distinction and the possibility of empirical control over the laws of logic:

Stoic logic was put forth at the vanguard of formal logic. Therefore, there is a need to revise many philosophical views grown on the ground of Aristotle's syllogistic. To such views I include, among others, the distinction between analytic and synthetic judgments [...]. I include [there also] this persistently ongoing, and an undoubtedly mistaken view [...] according to which deduction does not broaden our knowledge but only expresses explicitly what we implicitly put as our premises [...]. [Łukasiewicz 1936a, 325, 326]

The criticism presented by Łukasiewicz primarily concerned the Kantian understanding of the *A/S* distinction. He found it to be faulty and did not see anything to replace it; therefore, he opted for the rejection of *A/S* division everywhere with the possible exception of the calculus of names. The second part of his claim seems to imply that since deductions broaden our knowledge, then they should be controlled in essentially the same way as "synthetic sentences" cf. [Łukasiewicz 1929, 27–28], [Łukasiewicz 1936b, 129].

We could now, perhaps, agree that the ideas voiced in "Two Dogmas" in fact appeared much earlier, but can Tarski or Łukasiewicz be regarded as logical empiricists?⁸ And the matter is complicated even further, because at

8. In case of the former such interpretation is acceptable if we understand logical empiricism widely enough, for example, within the boundaries set by Neurath. Łukasiewicz, however, regarded himself as a critic of the Vienna Circle.

more or less the same time, Quine expressed doubts concerning the possibility of framing the *A/S* distinction. In the Spring of 1933, he visited Carnap in Prague who wrote in his diary after one of their discussions:

Quine, 31.3.33

He says after some reading of my "Syntax" MS: *Is there a difference in principle between logical axioms and empirical sentences?* He thinks not. Perhaps I seek a distinction just for its utility, but it seems he is right: gradual difference: they are sentences we want to hold fast. [Carnap's diary, 1933-03-31], quoted in [Quine 1991, 266]⁹

On the one hand, it gives us the proof that Quine was one of the earliest sceptics regarding the possibility of the *A/S* criterion; on the other one, however, we can see once more that Carnap agreed in principle with Quine's position. In the context of "Two Dogmas" his generally unknown reaction to Tarski's and Quine's remarks seems surprising: shouldn't they have caused rather a vehement protest of the most important protagonist of analyticity? If this is not the case, then maybe the logical empiricists were, in a way, prepared for such comments?

Already in the first edition of *Logical Syntax of Language*, Carnap included a note which confirms the assumption that the necessity to relativize analyticity had been pointed out much earlier than "Two Dogmas" and that this happened in the neo-positivist circles. In the part of the note where analytic sentences are discussed, Carnap says:

[...] ("analytic sentences"). This term, which was used in the first place by Kant, has been more sharply defined by Frege [...]. He calls a sentence analytic when, for its proof, only "the universal logical laws" together with definitions are necessary. Dubislav [...] has pointed out that the concept is a relative one; it must always be referred to a particular system of assumptions and methods of reasoning (primitive sentences and rules of inference), that is to say, in our terminology, *to a particular language*. [Carnap 1934, § 14, italics added]

The work of Walter Dubislav that Carnap referred to (*On the so-called Analytic and Synthetic Judgments*) [Dubislav 1926], was published a quarter of a century before "Two Dogmas".¹⁰ In this booklet Dubislav tried to demonstrate that Kant's *A/S* distinction was misleading and that making it work necessitated its relativisation, in the way summarised by Carnap in the passage quoted above. And this is how Dubislav concluded his own investigations:

9. Quine did not remember the conversation, therefore, naturally, he could not remember Carnap's reaction, cf. [Quine 1994, 218].

10. Of course, this does not mean that Carnap knew this book before 1933 (i.e., Quine's visit in Prague) or 1930 (i.e., Tarski's visit in Vienna).

A judgment is called “analytic” in relation to a system of assumptions and given types of justification when it is possible to justify this judgment properly, even if it is false, simply in virtue of the relevant system of assumptions with the exclusive use of given types of justification; otherwise, when it cannot be characterized as analytic in relation to the relevant system of assumptions and types of justification, it is called “synthetic” relatively to this system as well as to these types of justification. [Dubislav 1926, 24]

The same view was held later by Carl Hempel, another representative of the Berlin Group:

And [...] purely formal truth is not absolute, for it depends essentially on the formal specifications which we impose on the language in question. One cannot, therefore, say: “Such and such a proposition is analytic”, but only “It is analytic relative to a language which has such and such syntax”. What are called mathematical and logical truths hold, therefore, only in a system of reference whose specification has the character of a convention. [Hempel 1937, 70–71]

Quine certainly did not read either Dubislav's short book, or Hempel's article¹¹ but perhaps it is not of a great importance: when Quine already knew Carnap's reaction to “Two Dogmas”, he upheld A_Q in the revised version of this paper (1961) [Quine 1961]. But Carnap, referring directly to A_Q , wrote:

In case Quine's remarks are meant as a demand to be given on definition applicable to all systems, then such a demand is manifestly

11. Neither had he known Duhem's book, what may be rather surprising. In the second version of “Two Dogmas” (published in [Quine 1961]) there is a reference to *La Théorie physique*, added—as Quine himself admits—at the request of... Hempel and Frank, cf. [Quine 1991, 269], see also [Quine 1986-1998b, 619]. Quine, having residual knowledge about Neurath's works, did not refer to him. As he claims, by the time of “Two Dogmas”, Quine had read only two articles from 1931 and 1932, which Carnap gave him still in Prague, cf. [Uebel 1991, 639, fn.33]. Quine got better acquainted with Neurath's views in 1983 when they were presented to him by Dirk Koppelberg. Quine was then impressed by how much his own stance agreed with encyclopedism, cf. [Quine 1998, 736]. On the other hand, Tarski and Carnap were originally mentioned in “Two Dogmas” in a footnote, which mainly referred to the Harvard meetings: “[my] debt to other participants of those discussions, particularly Carnap, Church, Goodman, Tarski and White is great and *indefinite* [...]” [Quine 1951, 20, fn. 1, emphasis added]. However, in the best known version of “Two Dogmas”, which appeared in the second and the third edition of *From a Logical Point of View*, that footnote is no longer there. A similar passus is placed instead in the “Preface” [Quine 1961, viii]: Quine, for some reason, decided to remove those rather unspecified acknowledgments from “Two Dogmas”, and defended the claim that the criticism of A/S division, cf. [Quine 1985, 150], [Quine 1991, 266–277] or its origins, cf. [Quine 1986-1998, 16] appeared already in [Quine 1936]. Some criticism of this interpretation were presented in [Creath 1987], [Frost-Arnold 2011], [Frost-Arnold 2013, § 4.2]; see also [Mancosu 2005, 331], and below, p. 135, fn. 14.

unreasonable; it is certainly neither fulfilled nor fulfillable for semantic and syntactic concepts, as Quine knows [Carnap 1952, 430], cf. [Martin 1952], [Creath 1991, 364–371].

Does this limitation invalidate Quine's criticism of all particular criteria of analyticity? No, but even if this criticism is correct (in any particular case discussed by Quine), it at most points to the more or less serious technical problems. At this point such criticism ceases to be of interest to us,¹² especially considering that Quine himself eventually announced the criterion of analyticity.¹³

The second dogma of empiricism was reductionism which, according to Quine, lied at the bottom of verificationist theory of meaning. It was, however, repeatedly proven that verificationism and reductionism had been rejected by logical positivists already in the thirties, especially on the left wing of the Vienna Circle, to which the main recipient of Quine's criticism belonged (see the references in [Koterski 1998, 2.2]).

Thus, both claims regarded by Quine as the dogmas of empiricism were openly abandoned by logical empiricists many years prior to the publication of "Two Dogmas".

3 Empiricism without the dogmas

As we saw, Quine had serious doubts about the *A/S* distinction in the early thirties, but he formulated them only in a few personal remarks. His correspondence with Carnap after Harvard included further, and deeper concerns. However, as he admitted, all of this was far from a comprehensive criticism of analyticity his name is today associated with:

I had not thought to look on my strictures over analyticity as the stuff of revolution. It was mere criticism, a negative point of view with no suggestion of a bright replacement. [Quine 1991, 267], see also [Quine 1986-1998, 19]

12. Quine's dispute with Carnap eventually comes to a dead end. Quine takes into account the concept of relativised analyticity and admits that it is possible to give a definition of "analytic-in- L_0 "—but, he says, it would be arbitrary and too narrow. He is not satisfied with Carnap's explanation that there could not be too much freedom of choice because what is looked for is an explication of the term as used by philosophers, cf. [Grice & Strawson 1956, 142–143], [Putnam 1962, 360]. Quine was not convinced either that the theory of analyticity was possible only on the basis of pure semantics.

13. Admittedly, it does not solve the problem of analyticity in the form identified in the "Introduction" above, but it is behaviouristic. Cf. [Quine 1973, 78–80, § 21], [Quine 1991, 270], see also [Quine 1960, 66–67], [Quine 1986-1998a, 94–95].

At that time he did not have the idea of empiricism without the dogmas.¹⁴ But some logical empiricists did.¹⁵

In the second half of the thirties, Neurath's physicalism began to evolve into a sophisticated conception, the so-called encyclopedism. It was a holistic and naturalised theory of science, strongly contrasting with the older or "dogmatic" types of positivism. This kind of empiricism was a very good equivalent of Quine's empiricism without the dogmas. Because currently there are quite many valuable works devoted to Neurath's theory of science, we will not go into the details here, see, e.g., [Uebel 2007]. We do, however, want to point to a theory, which in spite of being well known in scientific philosophy circles, was not linked to encyclopedism although it was closely related to it.

In 1934, Edward Poznański and Aleksander Wundheiler, both members of the Lviv-Warsaw School, published a paper on "The Concept of Truth in Physics".¹⁶ Their work was written in Polish, but some neo-positivists were acquainted with its basic content. Rose Rand, born in Poland, who was an informal secretary of the Circle, summarized the article in fifteen pages in German. The analysis of archival sources allows us to determine that Rand's summary was known at least to Carnap, Neurath, and Hempel.

Poznański & Wundheiler consider the possibility of retaining the term "truth" in science.¹⁷ The studies of the history of science as well as of scientific practice, they maintain, demands the rejection of the hitherto "absolutist" concept of truth, according to which the truth of a proposition is irrespective of (a) a knowing subject, (b) the truth of other sentences, and (c) currently accepted theories in a given discipline. "Truth", if it is used in physics (in science), has a significantly different meaning, incompatible with the "absolutist" understanding; Poznański & Wundheiler's aim was to find this meaning. As a result, they propose replacing the "absolute" truth with an "operational" concept, which was empirically characterised as follows:

[...] the operational definition of truth includes a group of actions that lead to determining whether a sentence is true, i.e., a

14. Cf. above, p. 133, fn. 11. In May 1942 Quine writes to Woodger describing his Harvard discussions. In this letter there is passage suggesting that according to Quine and Tarski, and contrary to Carnap, the *A/S* distinction is an "empty phrase", and, therefore, that logical and mathematical theories require empirical control, similarly to those of physics, cf. [Mancosu 2005, 331], [Mancosu 2010, 395]. Although these are perhaps the most unequivocal of the currently known words issued by Quine at that time, they were still quite far from the radicalism of "Two Dogmas".

15. Quine: "The title of 'Two dogmas', [...] has proved unfortunate in its unintended but *very real* suggestion that there is no empiricism without the dogmas in question" [Quine 1960, 68, fn. 7, emphasis added].

16. For more information about Poznański and Wundheiler, see [Uebel & Koterski forthcoming].

17. The limitation, which they imposed on themselves, namely, to relate their analyses exclusively to physics, is highly artificial and the authors themselves do not always comply with it.

group of verification actions. "A sentence is true", in operational terms, means as much as "a sentence agrees with the system to which it belongs", or "a sentence obtained common agreement".¹⁸ [Poznański & Wundheiler 1934, 136–137]

Here we are only interested in just one claim: in science all true sentences are true only relatively to a certain system. Arguing in favour of truth thus understood, Poznański & Wundheiler describe science in terms of physicalism, radical fallibilism and anti-foundationalism as well as strongly emphasised holism. All those elements were present in Neurath's, and later in Quine's, works. The holistic approach is particularly important, because according to Quine (even if he later thought his approach in "Two Dogmas" to be too radical), holism explained the role and character of mathematics and logic better than conceptions of analyticity proposed by Carnap and others, cf. [Quine 1991, 268, 281].

Poznański & Wundheiler defended holism, contrasting it with "pyramidism" illustrated in the following way (Fig. 1): Scheme I represents a system:

it is possible to derive from axioms (A 's) in a more or less direct way all sentences that form this system. However, science is not a system in this sense. It does not resemble a pyramid, but rather a net where all sentences (and their acceptance) are more or less directly interrelated (see Fig. 2).

The net in the scheme II has a slightly irregular but still concentric structure with insets at its edge. Therefore, it may also represent Quineian "field of force": there are knots closer to the centre of the net—a place of logic and mathematics—and those which are not there, i.e., all "synthetic" sentences with the insets on the peripheries which "impinge on experience". Since there is no absolute truth in science, some changes on the verge of the net

18. The criticism of the absolutist conception of truth presented by Poznański & Wundheiler was also used by Neurath in the dispute over semantics with Tarski, Kokoszyńska and Carnap. It is worth stressing that their paper was published after Tarski's seminal work [Tarski 1933].

may result even in the most profound modifications of the interior because in the case of empirical failure in principle the whole net is judged. And this is the gist of empiricism without the dogmas. The view of Poznański & Wundheiler, deeply inspired by Duhem's book [Duhem 1906], is a counterpart of Quine's later holism.

4 Summary

The doubts concerning the *A/S* distinction appeared in the 1920s and 1930s and although Quine was one of the first sceptics about the *A/S* distinction, such scepticism appeared also independently (in the Berlin Group and the Lviv-Warsaw School). Regardless of who was first to criticise it, Quine's article included comprehensive criticism of the existing conceptions of analyticity, the first since Walter Dubislav's work was published,¹⁹ and he started many philosophically valuable, multithreaded discussions, which make "Two Dogmas" a most important work in twentieth-century philosophy. If we decide, however, that the criticism presented by Quine was not a goal in itself, but a tool to argue for a new type of empiricism, then the advantages of his article are questionable. Firstly, the holistic approaches to empiricism were proposed much earlier, and Quine either did not know about them or perhaps ignored them. Secondly, Quine was fundamentally wrong when he ascribed

19. Dubislav surveyed theories of analyticity of Kant, Nelson, Bolzano, and Frege; Quine's article has significantly wider scope but in some way it does not go beyond Dubislav's main conclusion: *A/S* division is only possible in its relativised version.

verificationism and reductionism to the logical empiricists in the fifties.²⁰ In this way he supported the *received view* interpretation of the Vienna Circle's philosophy of science, with which he considerably contributed to falsifying the history of philosophy of science.

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20. Richard Creath thinks it is an uncharitable interpretation of Quine's text and proposes an alternative reading [Creath 1991, 373–374]. Regardless of which version is closer to Quine's intentions, "Two Dogmas" was used—and it was possible due to the way in which Quine wrote there about reductionism and verificationism—to force much more uncharitable evaluation of neo-positivism.

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